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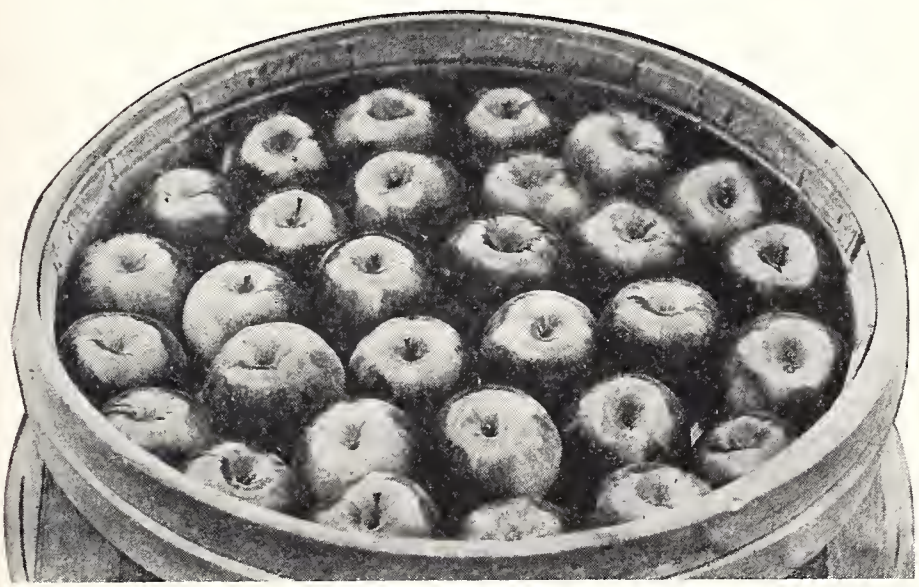
The Market For Pennsylvania Fruit



Pennsylvania Quality Fruit Ready for Market

C. G. JORDAN, *Secretary of Agriculture*

P. R. TAYLOR, *Director, Bureau of Markets*

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PENNSYLVANIA DEPARTMENT OF AGRICULTURE

C. G. JORDAN, *Secretary of Agriculture* R. G. BRESSLER, *Deputy Secretary*

This Department is essentially a service agency created by legislative enactment to deal with administrative, regulatory, investigational, and educational problems which can best be solved through public rather than individual action. The organization provides for coordination and cooperation with the Pennsylvania State College and the U. S. Department of Agriculture. The Department operates through the following bureaus:

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Prevents and eradicates transmissible diseases of animals and poultry, including tuberculosis of animals in cooperation with Federal Government.
Demonstrates to veterinarians control methods for transmissible animal diseases;
Supervises vaccination for and the prevention of hog cholera, anthrax, black leg and hemorrhagic septicemia;
Protects public from unwholesome meats through ante and post mortem examinations of animals at slaugbtering establishments;
Inspects, licenses and furnishes information as to breeding, soundness and conformation of stallions and jacks standing for public service;
Enforces law requiring licensing of dogs and providing for protection of livestock and people from attacks of uncontrolled dogs;
Maintains laboratory for diagnostic research and experimental projects.

PLANT INDUSTRY: R. H. BELL, *Director*

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Inspects orchards, parks, farms, and plant imports for injurious insects and plant diseases;
Inspects and licenses Pennsylvania nurseries, and licenses all dealers in nursery stock;
Enforces laws governing apicultural practices, disease control and housing;
Places and enforces quarantines and carries on eradiction campaigns against insect pests and plant diseases;
Inspects and certifies potatoes for seed purposes;
Makes investigations for the control of injurious insects and plant diseases including field tests of insecticides, fungicides and weed killers;
Maintains collections of insects, plant diseases, plants, and seeds, and identifies specimens.

FOODS AND CHEMISTRY: JAMES W. KELLOGG, *Director—Chief Chemist*

Accomplishes its purpose of protecting Pennsylvania homes against harmful foodstuffs by sampling, analyzing, and bringing prosecution under the laws relating to foods and non-alcholic drinks, including milk, cream, butter, ice-cream, eggs, sausage, fresh meats, soft drinks, fruit syrups, vinegar and kindred food products;
Regulates and issues licenses for the manufacture and sale of oleomargarine;
Licenses and regulates egg-opening plants and cold storage warehouses, maintaining regular inspection and enforcing twelve-month storage limit;
Inspects milk plants and creameries and regulates weighing, testing, buying and selling of milk and cream on a butterfat basis;
Protects honest manufacturers, importers, selling agents and ultimate users of feeding stuffs, fertilizers, lime products, linseed oil, paint, putty, turpentine, insecticides and fungicides, by means of annual registrations followed by inspections, analyses, prosecutions and the publication of the analyses of these products;
Analyzes special samples for residents of the State at the rate of $1.00 a sample for feeding stuffs, lime products and linseed oils.

MARKETS: P. R. TAYLOR, *Director*

Investigates and assists in the marketing of farm products; at present chiefly grain and hay, fruits and vegetables, poultry and eggs, and tobacco;
Compiles and distributes daily market information as to supplies, shipments and prices;
Advises growers on transportation of agricultural products;
Assists cooperative associations and public markets;
Establishes standard grades of farm products and maintains inspection.

STATISTICS: L. H. WIBLE, *Director*

Assembles and disseminates essential statistics and facts pertaining to the agriculture of the State, from monthly reports rendered by hundreds of volunteer crop correspondents, information which assists the producer in his sales and interests all industries which deal with agricultural products;
Cooperates with U. S. Bureau of Agricultural Economics in joint crop and livestock reporting and publishes annual and monthly summaries of the data;
Compiles dates of county and local fairs and assembles data pertaining to their success and results during each year.

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Summary

The excellence of Pennsylvania's many markets and the tremendous consuming power of this population attract fruit from all parts of the United States and from many foreign countries.

An average of 6668 cars of apples, 2709 cars of peaches and 7330 cars of grapes were received in 15 Pennsylvania markets during each of the years from 1921 to 1926.

To these markets Pennsylvania supplied annually 545 cars of apples, 96 cars of peaches, and 192 cars of grapes in addition to the large volume of fruit which was hauled to market by motor truck.

APPLES

New York furnished 39 per cent of the total apple receipts, Washington 29 per cent, Virginia, West Virginia, and Maryland combined 11 per cent, Pennsylvania 8 per cent, and New Jersey and Delaware combined 6 per cent.

Pennsylvania has ranked fourth or fifth in apple production during the past five years. Apples are grown in all parts of the state and are sold in local markets almost entirely except in the south-central counties.

The average annual shipments of apples have been 3193 cars, largely from Adams, Franklin, Cumberland, and York Counties to the four principal outlets for Pennsylvania apples which are, the export market, Pennsylvania cities, Greater New York, and southern markets.

The majority of 291 retailers in 10 Pennsylvania cities desire to purchase apples in units smaller than the barrel and their customers prefer Stayman, Jonathan, Delicious, Baldwin, and Rome Beauty in the order named.

Apple receipts have declined during the past six years as compared with citrus fruits, bananas, and pears.

More attention must be given to the grade and packing of Pennsylvania apples since future competition will largely be from adjacent states where transportation costs to Pennsylvania markets will not be an important factor.

PEACHES

Southern states, chiefly Georgia and North Carolina, supplied over 65 per cent of the average receipts of peaches while other northern states furnished over 30 per cent. Only three per cent came from Pennsylvania although large additional quantities of fruit were supplied by motor truck.

Most of the production is in small orchards, with the south central, western, and south eastern counties as the important centers. Practically all of this fruit is consumed locally except in the shipping districts in Franklin, Berks, Adams, York, and Cumberland counties.

Peaches must be sold as soon as harvested in any available market but despite this fact more shipments have been made to Pennsylvania cities during the past four years than to those of any other state.

Pennsylvania markets will continue to absorb a large proportion of the peach crop of the Commonwealth. If the surplus for shipment is well graded and packed it will do much to maintain a satisfactory price level for the balance of the crop.

GRAPES

Receipts of grapes have increased quite steadily largely because of the quantities received from California which furnished 77 per cent of the total receipts. New York ranked second with Michigan and Pennsylvania about equal over the past four years.

While grapes are grown in many parts of the Commonwealth for local sale the commercial shipping area is confined to Erie County. Of the average shipments of 925 cars from this county, one-third have gone to Pennsylvania, one-third to New York, with Ohio and New Jersey next in importance.

Although grapes do not compete with other fruits the large increase in production and shipments from California is the most serious problem of the Pennsylvania grape producers. The best future outlet for Pennsylvania grapes will be a standardized pack of table grapes superior to those from New York and Michigan in grade and quality.

The Market For Pennsylvania Fruit

By D. M. James and H. F. McFeely
Bureau of Markets*

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Fruit Consumption in Pennsylvania

Pennsylvania, located as it is in the heaviest consuming section of the country, attracts apples, peaches, grapes and other competing fruits from all important fruit producing areas. There is greater concentration of cities in Pennsylvania than in any State in the Union. This situation is of vital importance to producers of fruits in the entire country, particularly to those in Pennsylvania and adjacent States.

The Bureau of Markets has collected records for the six-year period, 1921 to 1926, to determine the origin of all carloads of fruits and vegetables unloaded in 15 Pennsylvania cities annually. The cities for which such records are available are the important distributing centers and comprise about 60 per cent of the urban population of the Commonwealth and are named as follows in order of population, according to 1920 census: Philadelphia, Scranton, Reading, Erie, Harrisburg, Wilkes-Barre, Allentown, Johnstown, Altoona, Lancaster, Bethlehem, York, Williamsport and Easton.

APPLES

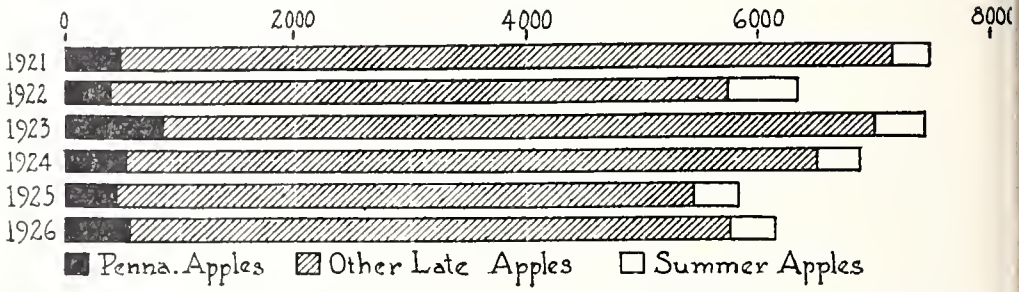
Sources of Apple Supply

Annual Receipts. An average of 6668 cars of apples were unloaded in the 15 markets listed above during each of the past six

*Acknowledgment is due to the United States Department of Agriculture for information and helpful cooperation and to the railroads in the Commonwealth for their willingness to make available all the necessary records for this study.

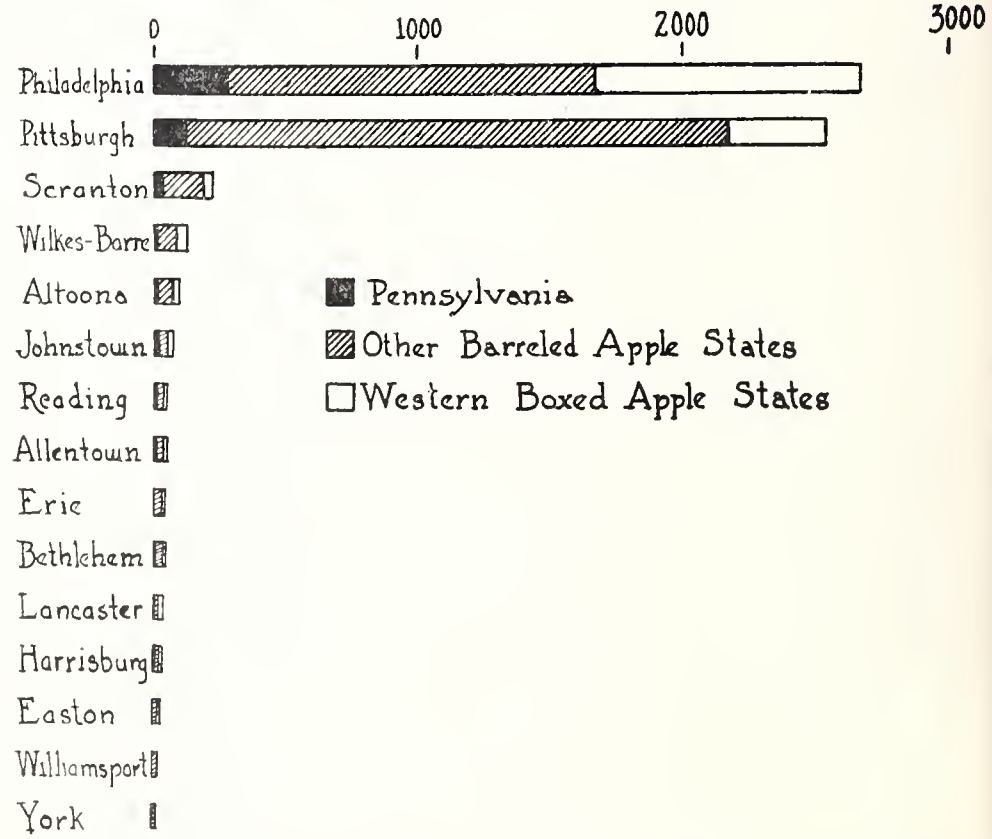
years. This amounts to about three and a third million bushels received by rail annually, in addition to large truck supplies from nearby orchards.

Chart I. Annual Carlot Receipts of Apples, 15 Markets, 1921-1926



The entire bar represents the total receipts for each year. These are declining, probably because of increased truck receipts. The "Other Late Apples" represent those received from states which are directly competitive with Pennsylvania. Receipts from Pennsylvania may be greatly expanded without increasing the total supply.

Chart II. Average Annual Carlot Receipts of Winter Apples by Cities 15 Markets, 1921-1926



Philadelphia received only slightly more winter fruit by rail than Pittsburgh, despite its greater population, because of the heavy receipts by truck from nearby producing areas. Philadelphia also used 1197 cars of western boxed apples as compared with 629 received at Pittsburgh. Practically all the smaller cities depend on nearby orchards for a considerable supply in addition to the cars received.

Receipts from Pennsylvania. Although the annual receipts of apples has tended to fall off considerably during the past six years, the percentage of those coming from producing sections in Pennsylvania is increasing slightly. Chart I shows the decline of total receipts and the increase from Pennsylvania. Undoubtedly the increased use of trucks for short hauls from producing sections to nearby markets has been one of the chief causes for lessened rail movement of apples into Pennsylvania markets.

Philadelphia uses more than twice as many carloads of Pennsylvania apples as Pittsburgh, many more western boxed apples and considerably fewer apples from competing eastern States.

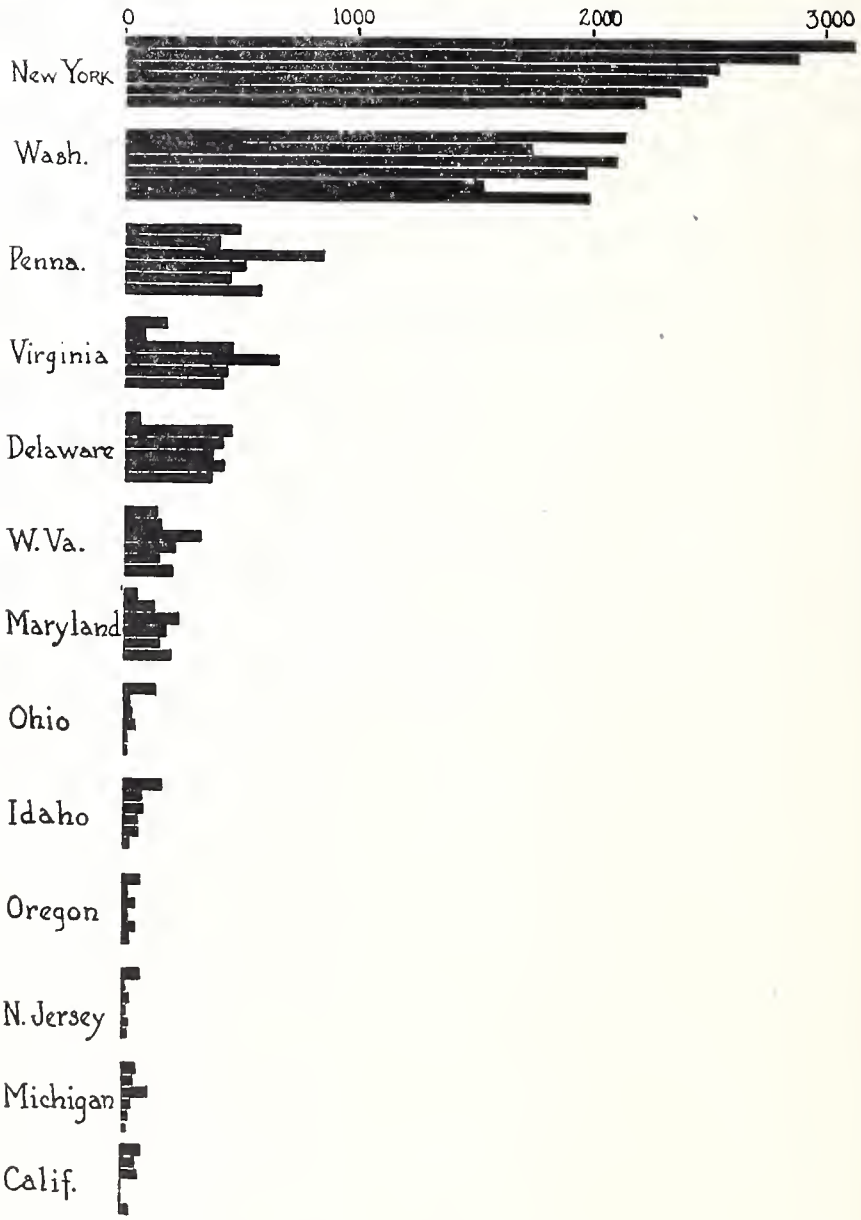
Aside from Philadelphia and Pittsburgh, the cities of Scranton, Johnstown, Allentown, Reading, Altoona and Bethlehem are the heaviest users of the Pennsylvania carlot apple supply. In Wilkes-Barre, Harrisburg, Lancaster, Easton, Erie, Williamsport and York the receipts of Pennsylvania apples are strikingly few. These cities are supplied with heavy truck receipts from nearby producing sections. These smaller markets receive many boxed apples by rail in less than carlot shipments from large eastern cities, which accounts for some of the light carlot receipts.

Table 1. Average of Apple Receipts (cars)—1921-1926

Market	Late Apples		Early	Total
	Penna.	Others		
Philadelphia	282	2563	38	2883
Pittsburgh,	115	2397	293	2805
Scranton,	33	189	32	254
Wilkes-Barre,	6	128	28	162
Altoona,	13	82	13	108
Johnstown,	23	61	6	90
Erie,	2	49	5	56
Allentown,	15	41		56
Bethlehem,	12	37	1	50
Reading,	9	39	1	49
Lancaster,	10	38		48
Harrisburg,	10	37		47
Williamsport,	2	21		23
Easton,	5	16		21
York,	6	10		16
Total,	543	5708	417	6668

Receipts from New York. The quantity of apples coming into Pennsylvania markets has been heaviest from New York State each year but has been declining steadily and quite rapidly during these six years. The percentage of the total receipts supplied by New York State has been fairly uniform although decreasing some-

Chart III. Important Sources of Carlot Apple Supply
15 Markets, 1921-1926



The first bar in each group represents the cars received from the designated state in 1921, with bars for succeeding years following in order. Receipts from New York represent 39 per cent of the total but have decreased in number each year. Washington averaged 29 per cent of the total. Pennsylvania receipts are increasing slightly but not as rapidly as those from Virginia, West Virginia and Maryland. The reduction in rail receipts from Delaware and New Jersey, sources of summer apples, is largely due to truck hauls. Fruit from Ohio, Idaho, Oregon, Michigan and California has almost disappeared from Pennsylvania markets during these six years.

what. New York is the chief source of apples in both Philadelphia and Pittsburgh, but relatively more important in Pittsburgh.

Receipts from Washington. The bulk of the boxed apple supply has been received from Washington, this State ranking second to New York in volume of supply. Although the total number of cars from Washington has tended to decrease during the six years, the percentage of the total receipts coming from this State has been quite uniform, varying from 26 to 31 per cent.

Table 2. Percentage of Apple Receipts from Various Sources

15 Markets—1921-1926

	Number of Cars	New York	Wash.	Penna	Va., W. Va., Md.	N. J. and Dela.
1921,	7477	42%	29%	7%	5%	2%
1922,	6326	46%	28%	6%	6%	7%
1923,	7434	34%	28%	11%	14%	6%
1924,	6872	36%	29%	8%	15%	6%
1925,	5833	41%	26%	8%	13%	8%
1926,	6117	36%	31%	9%	14%	6%
Average	6676	39%	29%	8%	11%	6%

Receipts from other Western States. Boxed apples are received in appreciable quantities from Idaho, Oregon and California, ranked in order of their importance. The trend of receipts from these States, as well as Washington, has been decreasing in recent years.

Receipts from Competing Eastern States. Although the competition from New York seems to be less of a factor each year, the other important eastern producing States principally Virginia, West Virginia, Maryland and Delaware, are becoming more important competitors to Pennsylvania. The carlot receipts of apples from each of these States is tending to increase. However, receipts from New Jersey have declined rapidly. This does not mean that New Jersey has become less of a competitor but that truck hauls have increased to Philadelphia and other eastern Pennsylvania cities.

Seasonal Variation in Supply

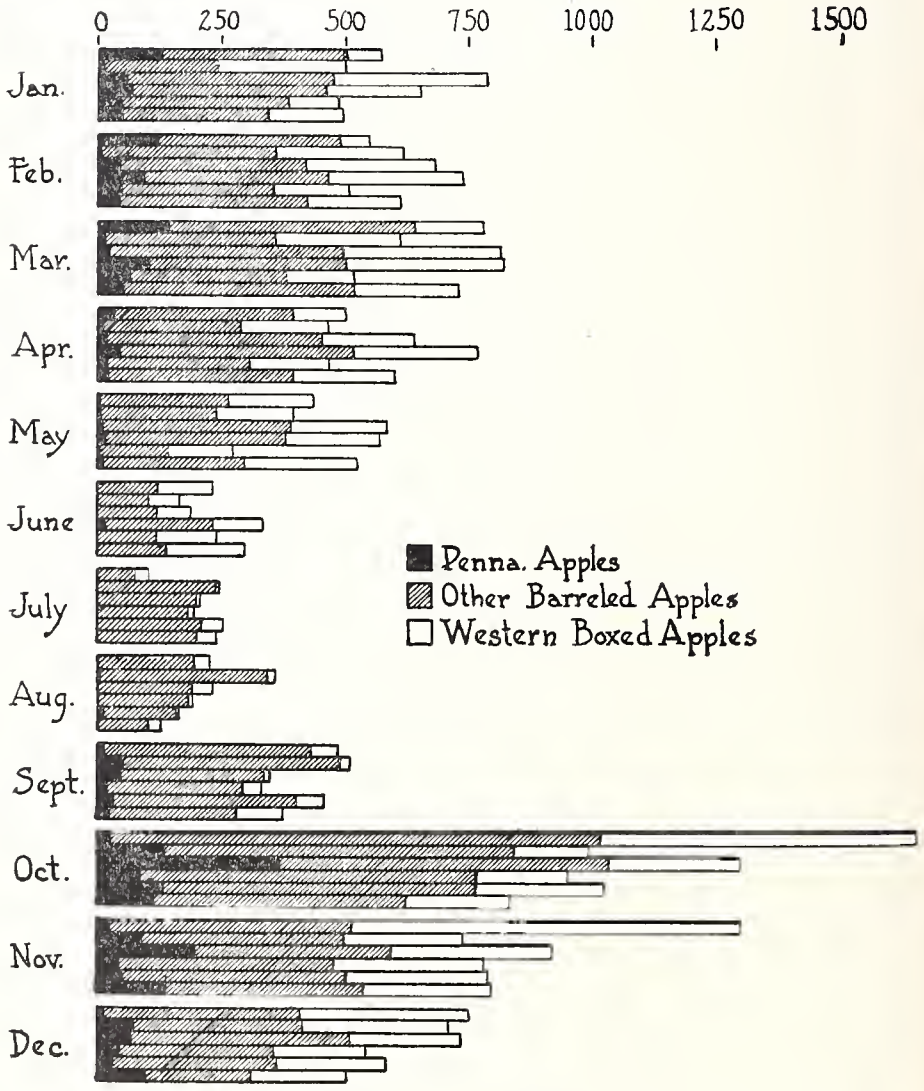
Apples are an important year around commodity, the unload figures showing that considerable quantities are received each month. Increased production and more and better cold storage facilities in producing areas have made this year round supply possible.

The heaviest rail movement occurs during October, during which month the main harvesting of winter apples take place. November receipts are heavy but lighter than in October. The smallest receipts are during June, July and August. The tendency has been to

delay marketing from the fall and early winter months to the late winter and spring months. More apples are being held in the producing sections each year until after the fall glut.

Chart IV. Carlot Receipts of Apples by Months

15 Markets, 1921-1926



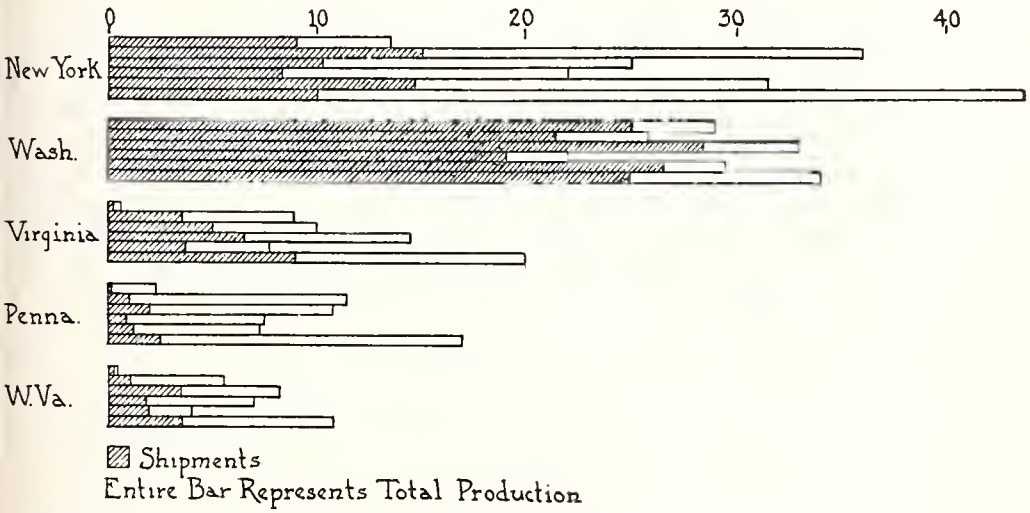
The first bar for each month represents the receipts during month in 1921, with bars for the same month of each succeeding year following in order. Receipts are declining from August thru January but increasing from February thru May, as a result of increased storage. Pennsylvania fruit will meet with less competition if the marketing period is lengthened into the late winter months. Western fruit is marketed quite uniformly from October thru June.

Pennsylvania Production and Shipments

The six year average apple production (1921-1926) for Pennsylvania was 7,021,750 bushels. The 1926 estimated crop exceeded this six year average by nearly ten million bushels. This indicates

the heavy production which is possible in the Commonwealth in years of high yield. With even greater production in prospect in coming years, because of the young orchard factor, the marketing of the apple crop has become an important problem for the Pennsylvania grower.

Chart V. Comparison of Total Apple Production and Shipments by States 1921-1926



The first bar of each group compares the estimated total production of each of the states with the quantity shipped during the marketing period of 1921. Each succeeding year is shown in rotation. Each car is figured as 500 bushels for eastern states and 756 bushels for Washington. Pennsylvania ships a smaller proportion and Washington a larger proportion of the total production than the other important producing states shown. Shipments are tending to increase from Pennsylvania, Virginia and West Virginia.

Since 1922, Pennsylvania has ranked in either fourth or fifth places as an apple producing State. New York and Washington

Table 3. Rank of Leading Apple Producing States

(Based on Total Production)

1921	1922	1923	1924	1925	1926
1. Washington	New York	Washington	*New York	Washington	New York
2. New York	Washington	New York	*Washington	New York	Washington
3. Oregon	Michigan	Michigan	Virginia	Virginia	Virginia
4. California	Pennsylvania	Ohio	California	California	Pennsylvania
5. Michigan		Pennsylvania	Pennsylvania	Pennsylvania	
6. Idaho					
7. Maine					
8. Ohio					
9. Colorado					
10. Illinois					
11. Pennsylvania					

*New York and Washington had the same estimated production in 1924.

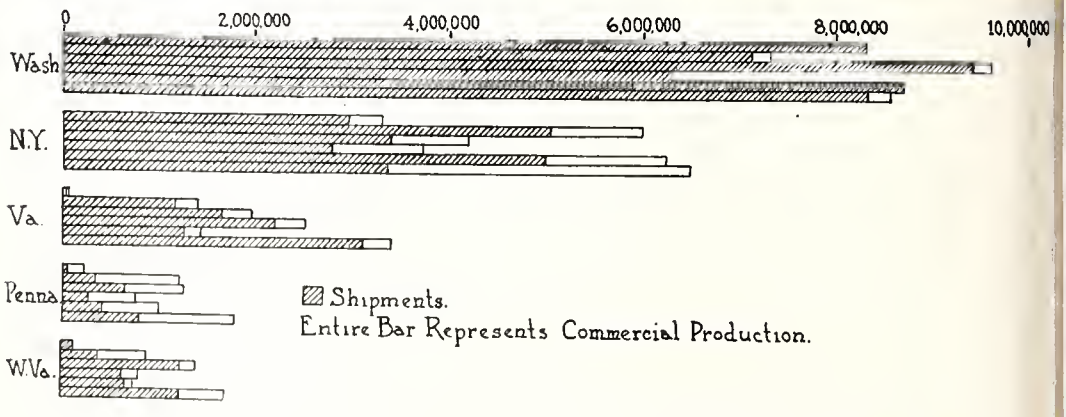
have alternated between first and second places each year since 1920 except in 1924, when the two produced approximately the same sized crops. During the last six years, Virginia has exceeded Pennsylvania in production four times and Michigan three.

Table 4. Rank of Leading Apple Shipping States

1921	1922	1923	1924	1925	1926
1. Washington	New York	Washington	Washington	Washington	Washington
2. New York	Washington	New York	New York	New York	New York
3. Oregon	Virginia	Virginia	Virginia	Virginia	Virginia
4. Michigan	Illinois	Michigan	Illinois	Idaho	West Virginia
5. Idaho	Michigan	W. Virginia	Oregon	Illinois	Oregon
6. California	California	Idaho	California	Michigan	Illinois
7. Maine	Idaho	Illinois	W. Virginia	Oregon	Pennsylvania
8. Colorado	Colorado	California	Arkansas	W. Virginia	
9 W. Virginia	Missouri	Oregon	Michigan	Colorado	
10. Utah	Arkansas	Missouri	Missouri	Arkansas	
11. Montana	W. Virginia	Pennsylvania	Colorado	Missouri	
12. New Mexico	Pennsylvania		Idaho	Pennsylvania	
13. Ohio			Maine		
14. Illinois			Pennsylvania		
15. Virginia					
16. Pennsylvania					

Rank in Shipment. Although high in production, Pennsylvania does not rank high in carlot shipments. Because of the home markets it is not necessary to ship to any extent except from the commercial producing area.

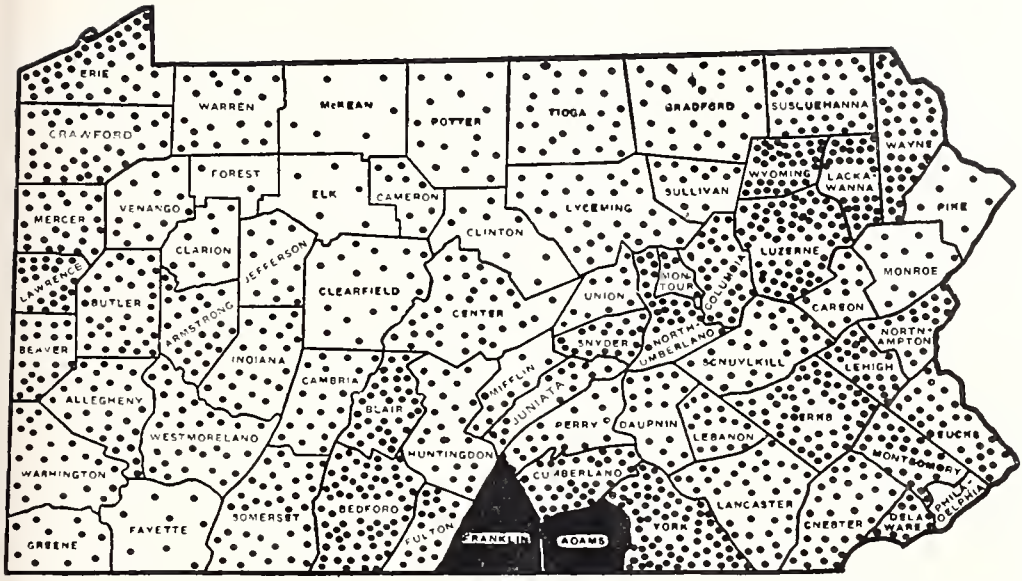
Chart VI. Comparison of Commercial Production and Shipments of Apples by States—1921-1926



The first bar of each group compares the estimated commercial crop of each of the important producing states with the quantity shipped in 1921. Each succeeding year follows. Each car is figured as 500 bushels for the eastern states and 756 for Washington. The tendency for shipments to increase in Pennsylvania, Virginia and West Virginia is again shown, as compared with the fairly uniform shipments from Washington and New York.

Chart VII. Total Apple Production—1926

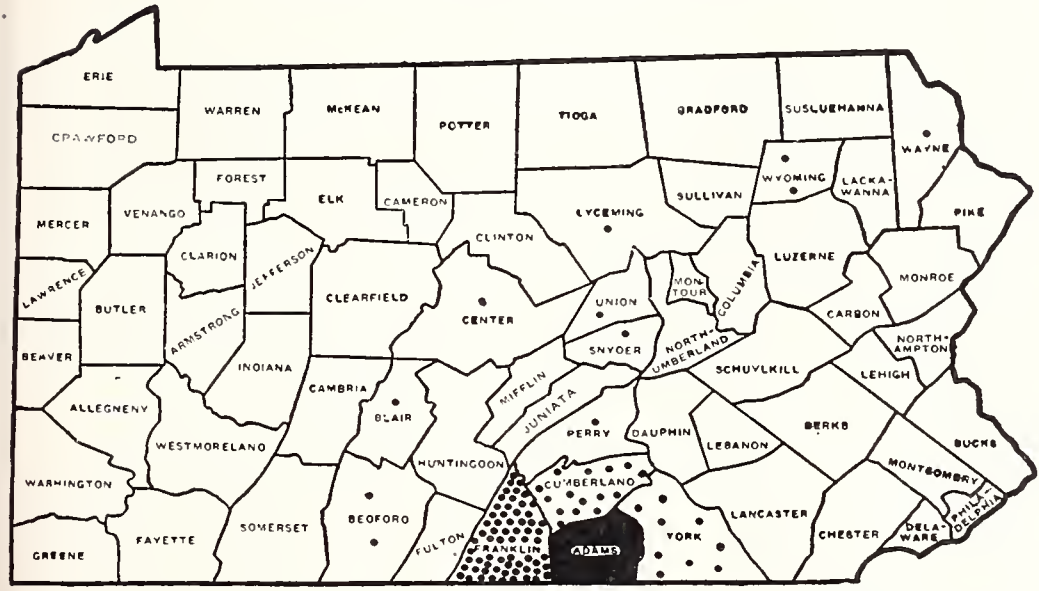
Each Dot Represents 10,000 bushels



Apples are grown in all parts of the state but in smallest volume in the north-central section. While the industry is concentrated in Adams and Franklin Counties, apple production is important in over one-third of the counties.

Chart VIII. Apple Shipments—1926 Crop

Each Dot Represents 10,000 bushels



Rail shipments are concentrated from Adams, Franklin, Cumberland, and York Counties. Local markets absorb almost all of the production in the other counties.

Leading Apple Producing Counties. All counties in Pennsylvania produce some apples although largely limited to farm orchards in certain districts, particularly in the north-central region. The commercial producing section is largely confined to Adams, Franklin, Cumberland and York counties. In practically all the other counties the bulk of the apples produced are consumed locally rather than shipped by rail.

The carlot shipments of apples are practically limited to the four counties mentioned. With the exception of Adams and Franklin, the heaviest producing counties are not necessarily the heaviest shippers. Luzerne, Berks, Lancaster, Chester, Erie, Lawrence and Beaver are typical of the counties with large production which dispose of the major portion of their crop in local markets.

Table 5. Leading Apple Producing Counties

1921	1922	1923	1924	1925	1926
1. Adams	Adams	Adams	Adams	Adams	Adams
2. Allegheny	Franklin	Franklin	Franklin	Franklin	Franklin
3. Westmoreland	Luzerne	Luzerne	Wayne	York	Bedford
4. Franklin	Berks	Bedford	York	Luzerne	Luzerne
5. Butler	York	York	Luzerne	Bedford	Berks
6. Bedford	Susquehanna	Erie	Susquehanna	Cumberland	Wayne
7. Mercer	Tioga	Cumberland	Wyoming	Berks	Erie
8. York	Bedford	Allegheny	Berks	Lackawanna	Somerset
9. Northampton	Potter	Mercer	Westmoreland	Lancaster	Lancaster
10. Cumberland	Wayne	Butler	Erie	Schuylkill	Crawford

Table 6. Leading Apple Shipping Counties

1921	1922	1923	1924	1925	1926
1. Adams	Franklin	Franklin	Franklin	Adams	Adams
2. Franklin	Adams	Adams	Adams	Franklin	Franklin
3. Lawrence	Cumberland	Cumberland	Cumberland	Cumberland	Cumberland
4. York	York	York	York	York	York
5. Wyoming	Bedford	Bedford	Wyoming	Wyoming	Wyoming

Initial Destinations of Pennsylvania Apples. The initial destinations of apple shipments from many of the heavy shipping points in the Commonwealth from 1923-1926 show that although Pennsylvania apples are widely distributed, the most of them are disposed of through four main outlets. These are: The export market, Pennsylvania cities, Greater New York and southern markets.

The Export Markets. The increase in the exporting of Pennsylvania apples during the last four years is especially striking. The available records show that 16% of the Pennsylvania shipments were exported in 1923, 13 per cent in 1924, 28 per cent in 1925, and 55 per cent in 1926. The crop shortage in Europe and the heavy

Table 7. Initial Destinations of Pennsylvania Apple Shipments, 1923-1926

	Four Year Average	1923 crop	1924 crop	1925 crop	1926 crop
Export	641	323	94	387	1759
Pennsylvania	406	568	196	343	518
New York	286	413	190	207	333
New Jersey	77	95	14	30	170
Florida	51	32	51	93	26
Maryland	50	88	44	33	35
Virginia	40	69	2	55	35
Washington, D. C.	36	36	5	54	49
South Carolina	28	26	21	47	16
Ohio	27	53	11	15	30
Illinois	21	16	32	4	32
Massachusetts	19	55	5	3	11
Tennessee	17	22	5	22	19
Connecticut	16	26	5	2	32
West Virginia	16	29	1	7	28
Indiana	16	20	16	11	16
Georgia	13	8	1	21	21
North Carolina	11	14	10	18	2
Alabama	7	7	9	8	3
Kentucky	5	4	----------	4	11
Wisconsin	5	4	7	3	4
Arkansas	3	4	2	4	1
Others	15	12	15	3	31
Total	1804	1924	736	1374	3782
Total Pennsylvania Shipments	3193	3970	1652	2383	4866

production in the United States account for much of the increase in the exporting of Pennsylvania apples in 1926. Certain varieties grown in the commercial area of the Commonwealth are also a factor in increased exporting, since they do not sell well in most domestic markets. Among these varieties are York Imperial, Ben Davis, Gano and Black Twig, which are produced in large quantities in many orchards. Because they under-sell the better quality apples in domestic markets and at the same time have good carrying qualities, they have found a ready market in Europe and South America.

Pennsylvania Markets. There has been a smaller percentage of shipments to points in Pennsylvania during each of the past four years, according to initial destination figures. While 30 per cent of the Pennsylvania shipments of the 1923 crop reached cities in the Commonwealth, in 1924 this percentage dropped to 27, in 1925 to 25, and in 1926 to 16 per cent. Except in those markets which secure their supply by truck from nearby orchards, Pennsylvania markets should be utilized as an outlet for a greater portion of the crop.

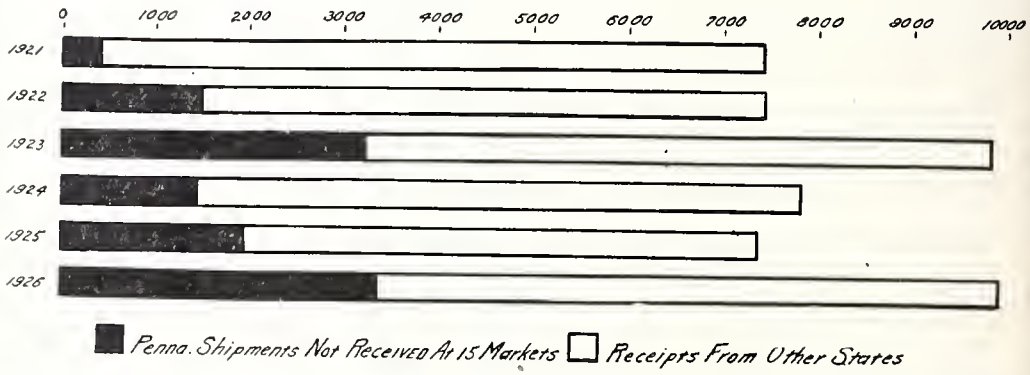
Philadelphia and Pittsburgh are using approximately 5,000 cars of late apples from other States each year. This indicates in a striking way the opportunities for expanding local markets available, to Pennsylvania orchardists, at the present time.

Greater New York Market. The large portion of Pennsylvania shipments to New York State are for consumption in Greater New York. During the past two years, this market has been using a smaller percentage of the total Pennsylvania shipments than formerly. In 1923 and 1924, 22 and 26 per cent respectively, of these shipments were destined to New York, in 1925 only 15 per cent, and in 1926, 10 per cent.

Southern Markets. Fifteen per cent of the total Pennsylvania shipments during the past four years has gone to States south of Pennsylvania, indicating the importance of southern markets.

Chart IX. Carlot Receipts From Other States Compared with Pennsylvania Shipments to Other States

15 Markets, 1921-1926



This chart shows the potential home market for Pennsylvania apples. The black portion represents shipments of Pennsylvania apples which were not received in 15 markets within the Commonwealth while the white portion shows the shipments into these markets from other states.

Florida has been the heaviest consumer of Pennsylvania apples in this territory with Maryland, Virginia, South Carolina and District of Columbia following in order named.

Relation of Pennsylvania Shipments to Receipts at 15 Markets. Receipts of apples in the 15 Pennsylvania cities were more than twice the number of cars loaded at Pennsylvania points during four of the last six years, while in the other two years, the receipts were still greatly in excess of shipments. When Pennsylvania markets receive more cars of late apples from other states, than are shipped from Pennsylvania to other markets each year, it is evident that there is no over production of apples in our commercial apple district.

Relation of Consumer Preferences to the Use of Pennsylvania Apples. In order to determine the effect of retail and consumer preferences on the sale of Pennsylvania apples, 291 retail stores were visited in ten representative cities of the State early in 1927. This survey showed four important points: First, that only a few varieties of apples are preferred by Pennsylvania consumers; second, smaller size packages are favored to the barrel pack; third, retail sales are increased when convenient packages of moderate size are sold to consumers; fourth, that a uniform, standardized pack of eastern fruit is required in order to win additional market preference.

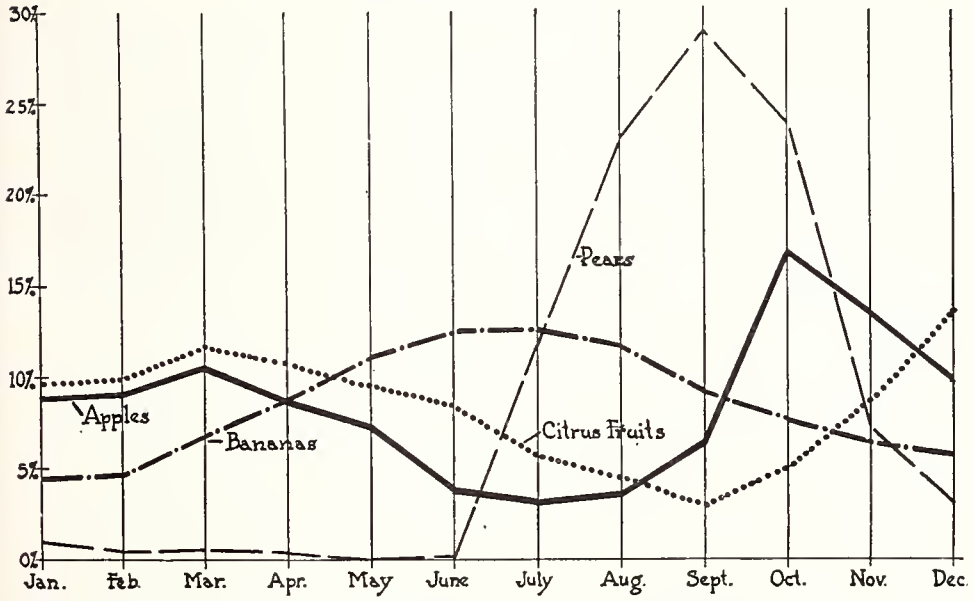
Stayman, Jonathan, Delicious, Baldwin and Rome Beauty are the varieties having the widest distribution among Pennsylvania retailers. The decrease in carlot receipts of Pennsylvania apples is probably due to the fact that York Imperial and other similar varieties are not in great demand by Pennsylvania consumers.

The retailer prefers the smaller package because it is more convenient to handle and less waste results. The stiff-side, tub basket was found to be held with increasing favor among retailers.

Competing Commodities. Apples are sold on the market the

Chart X. Comparison of the Marketing Period of Apples and Competitive Fruits

1921-1926 Average



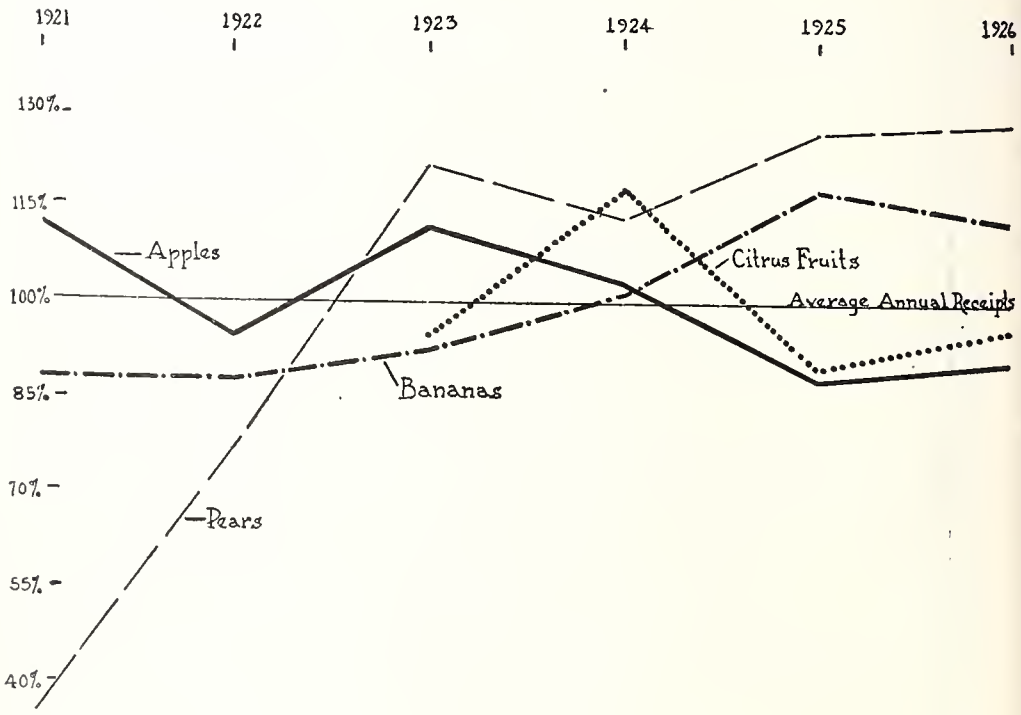
Using 100 per cent to indicate the average annual receipts of each commodity, the percentage of the annual receipts used each month is shown by this chart. Apples and citrus fruits follow closely throughout the year until August, when apple receipts increase more rapidly than receipts of citrus. Bananas reach their highest volume from May to August. Pears are received in greatest volume from July to November.

year-round and therefore compete directly with bananas, citrus fruits and pears. Two accompanying charts show the months of the year during which the competition is keenest between these commodities and the trend in annual receipts over a six year period.

The marketing period for apples competes rather closely with citrus fruits throughout the year. The heavy apple receipts begin in October, about a month before the heavy citrus receipts, the latter reaching their peak in December and continue heavy during the winter and spring months. Apple receipts are heavy during the same months while banana receipts are fairly constant throughout the year, with the peak occurring in mid-summer. The heavy receipts of pears are largely confined to the last five months of the year with the peak coming in September, which makes pears competitive with early apples.

Carlot Receipts of Apples Declining. Carlot receipts have de-

Chart XI. Comparison of Yearly Receipts of Apples and Competing Fruits 1921-1926



Using 100 per cent to indicate the 6 year average receipts of each commodity, the percentage of the average receipts used each year (1921-1926) is shown by this chart. Apple receipts have decreased slightly during this period, while pears and bananas have increased. Citrus receipts have been irregular from 1923 through 1926.

clined during the six year period as compared to a decided increase in banana and pear receipts. Citrus receipts have been irregular over a period of four years and no definite trend upward or downward is noticeable.

Table 8. APPROXIMATE FREIGHT RATES FROM VARIOUS SHIPPING POINTS TO PENNSYLVANIA MARKETS

These rates include only transportation charges. Service and other extra charges not included

APPLES

Shipping Point	To Philadelphia			To Harrisburg			To Scranton			To Pittsburgh		
	Cwt.	Bu.	Bbl.	Cwt.	Bu.	Bbl.	Cwt.	Bu.	Bbl.	Cwt.	Bu.	Bbl.
Biglerville, Pa.,	25½c	13c	41c	17½c	9c	28c	28½c	14½c	45½c	31c	15½c	49½c
Chambersburg, Pa.,	28½c	14½c	45½c	17½c	9c	28½c	28½c	14½c	45½c	31c	15½c	49½c
Bedford, Pa.,	31c	15½c	48½c	30c	15c	48c	31c	15½c	49½c	27c	13½c	43c
Falls, Pa.,	28½c	14½c	45½c	28½c	14½c	45½c	11½c	6c	18½c	27c	13½c	43c
E. Hebron, Maine,	42½c	21½c	68c	42½c	21½c	68c	40½c	20½c	65c	36½c	18c	58½c
Rochester, N. Y.,	28½c	14½c	45½c	28½c	14½c	45½c	28½c	14½c	45½c	27c	13½c	43c
Hancock, Md.,	31c	15½c	49½c	34c	17c	54½c	31c	15½c	49½c	31c	15½c	49½c
Winchester, Va.,	32c	10c	51c	25c	12½c	40c	32c	16c	51c	31c	15½c	49½c
Lewistown, Idaho,	1.50	74c	------	1.50	74c	------	1.50	74c	------	1.50	74c	------
Spokane, Wash.,	1.50	74c	------	1.50	74c	------	1.50	74c	------	1.50	74c	------

Competing Sections. New York State, Washington and other States compete directly with Pennsylvania in supplying apples to Pennsylvania cities. While growers in this Commonwealth have very little if any advantage in freight rates over points in New York, Maryland, Virginia, and other nearby States in reaching the Pennsylvania markets, there is about a 60 cent per bushel advantage over western states.

The Pennsylvania growers must regard the other eastern apple states as their real future competitors. This means that they cannot expect transportation costs to remain as an important factor in their favor. Pennsylvania produces apples which are as highly flavored as those from any other State because the climate is favorable for their production. Having this advantage, the Pennsylvania grower can meet the competition from the other apple producing States by satisfying the consumer preferences for varieties, high color, uniform size and grade, and popular packages. The keen competition from highly specialized apple growing States has made it imperative for Pennsylvania growers to use the greatest care in grading and packing the fruit.

PEACHES

Peach Consumption in Pennsylvania

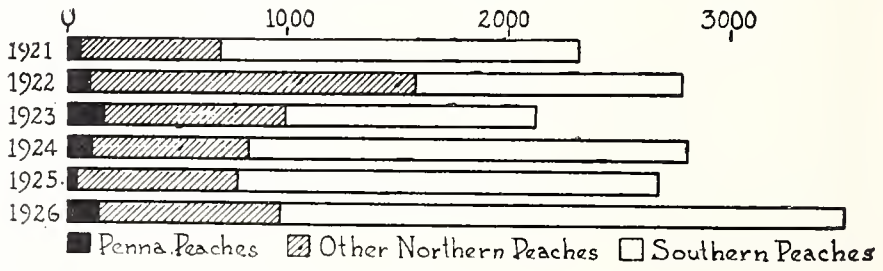
Approximately 2700 cars or 1,000,000 bushels of peaches have been received annually for the past six years in 15 large Pennsylvania markets. Since peaches are a perishable commodity and carlot receipts of peaches are heavy for only three months, the competition is very keen.

Sources of Peach Supply

Annual Receipts. An average of 2709 cars of peaches were unloaded in the 15 markets during each of the years from 1921 to 1926 inclusive.

Rail movement of peaches into Pennsylvania cities is increasing. This is shown by the heavy receipts for 1924 and 1925 and greatly increased receipts in 1926. This increase is due to the greater volume of early peaches received from the southern producing states.

Chart XII. Annual Carlot Receipts of Peaches
15 Markets, 1921-1926



Total peach receipts are increasing slightly, while those from southern states have expanded to a greater degree. Receipts from Pennsylvania and the northern states remain about the same.

Receipts from Pennsylvania. Philadelphia uses a large volume of southern peaches; carlot receipts from Pennsylvania points and from competing states are surprisingly few. The proximity of extensive peach sections within trucking distance of Philadelphia, in New Jersey and in Delaware principally, accounts for the light rail receipts of northern-grown peaches in Philadelphia. Pennsylvania growers can not expect a strong demand for rail shipped northern-grown peaches in Philadelphia during years when large crops of peaches are produced within trucking distance of the city.

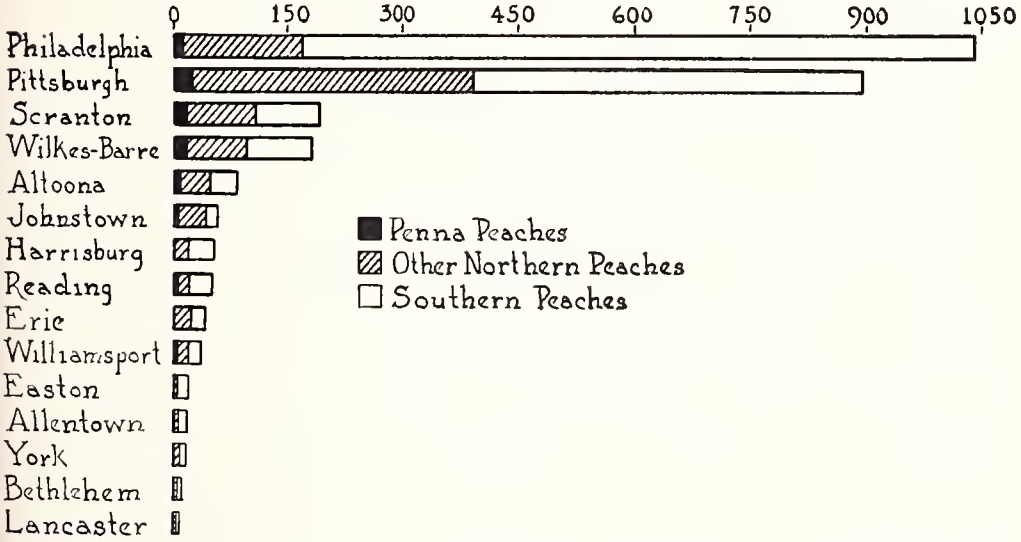
Pittsburgh is an important market for Pennsylvania and competing peaches although over half the carlot receipts in this city are

Table 9. Six Year Average of Peach Receipts in 15 Cities

Allentown,	2	5	10	17
Altoona,	7	36	40	83
Bethlehem,	2	4	5	11
Easton,		4	16	20
Erie,	2	18	22	42
Harrisburg,	3	16	34	53
Johnstown,	6	32	18	56
Lancaster,		3	6	9
Philadelphia,	8	157	873	1038
Pittsburgh,	23	348	533	904
Reading,	4	14	31	49
Scranton,	16	90	88	194
Wilkes-Barre,	17	77	83	177
Williamsport,	4	20	12	36
York,	2	7	10	19
Total,	96 Penna.	831 Northern	1781 Southern	2708 Total

of southern origin. There are more carloads of Pennsylvania peaches used in Pittsburgh each year than in any other city in the Commonwealth. This is in addition to the truck receipts from nearby producing sections. The heavy supply of peaches received each year from competing states such as Illinois, New Jersey, Delaware, Maryland, West Virginia and Ohio shows that there is a real opportunity to dispose of more Pennsylvania peaches in Pittsburgh.

Chart XIII. Average Annual Carlot Peach Receipts by Cities 1921-1926

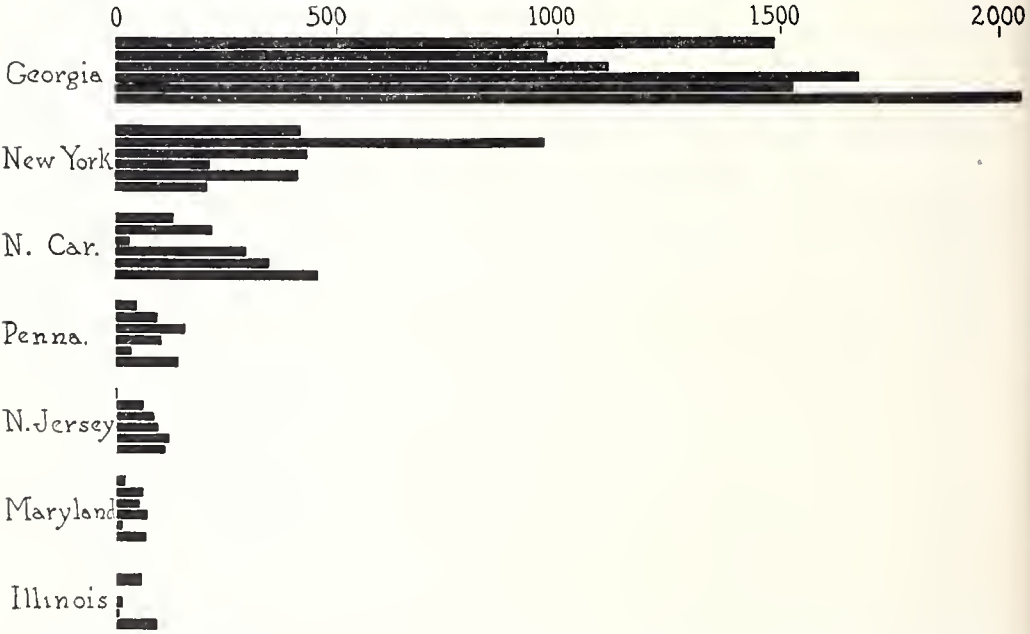


Philadelphia uses only a few more cars of peaches than Pittsburgh because of the large volume of this fruit grown within trucking radius. Almost 900 cars of southern peaches are used at Philadelphia as compared with less than 500 cars at Pittsburgh. Carlot receipts at smaller markets are largely discontinued during the period when the crop grown nearby is being harvested.

Altoona, Scranton, Wilkes-Barre and Johnstown use heavy receipts of northern-grown peaches which might be supplied to good advantage by Pennsylvania peach growers.

Carlot receipts in Harrisburg, Reading, Erie, Williamsport, Easton, York, Bethlehem and Lancaster are light for both southern and northern-grown peaches. Heavy supplies of southern peaches are received in these markets in less than carlots or by truck from Philadelphia, Pittsburgh and Baltimore. Truck receipts of Pennsylvania-grown peaches are heavy in most of these markets, particularly in Erie, Reading, Harrisburg, York, Lancaster and Allentown in years of large local production.

Chart XIV. Principal Sources of Carlot Peach Receipts by States 1921-1926



The top bar of each group represents the number of cars received from that state in 1921 and similar bars for subsequent years follow. Georgia and North Carolina are the main sources of Southern peaches with receipts from these states increasing steadily. Pennsylvania, New Jersey and Maryland show a tendency to increase each year while Illinois enters Pennsylvania markets only in occasional years when market conditions permit. New York, the chief source of late peaches, is steadily losing ground.

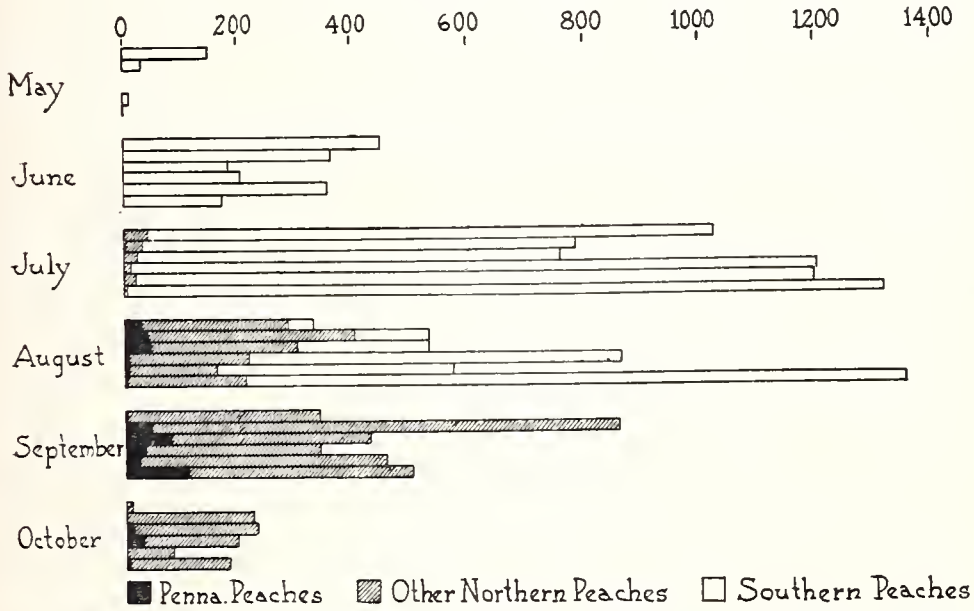
Receipts from Southern States. Georgia is the chief source of peaches coming into Pennsylvania cities. While the receipts are increasing each year in volume, the percentage of the total receipts is decreasing. In 1921, 67 per cent of the carlot supply at 15 markets originated in Georgia and by 1926 this percentage had dropped to 58 per cent.

North Carolina is the second important source for southern-grown peaches. The supply has been constantly increasing except in 1923

when that state had a greatly curtailed crop. The percentage of total receipts coming from North Carolina has increased from 6 per cent in 1921 to 13 per cent in 1926, showing that the growers of that state have won favor in northern markets by supplying a well graded product of high quality. Other southern states supplying peaches in limited quantities to Pennsylvania cities, include South Carolina, Arkansas, Tennessee and Virginia.

Chart XV. Carlot Receipts of Peaches by Months

15 Markets, 1921-1926



The top bar of each group represents the receipts during that month in 1921, with bars for succeeding years following. Receipts from southern states are decreasing in June, but increasing in July and August. The Pennsylvania crop is marketed during September with receipts increasing during that month and decreasing during October.

Receipts from New York. New York is the most important source of northern-grown peaches for Pennsylvania cities. These compete with only those Pennsylvania peaches grown in the northern part of the Commonwealth. The rail movement of peaches out of the south-central Pennsylvania counties is practically completed each year before the New York state peaches begin to move to market.

Receipts from other Competing States. New Jersey, Maryland and Illinois are the heaviest shippers of the northern-grown peaches into Pennsylvania markets during the season when Pennsylvania peaches are being marketed. The New Jersey season opens several weeks before the Pennsylvania season but the late New Jersey

peaches compete directly with the Pennsylvania crop, particularly in the Philadelphia market. The trend of carlot receipts from New Jersey has been steadily upward. This is indicative of the increased production in that state, especially since the truck hauls have also continued heavy from New Jersey into eastern Pennsylvania. Peaches shipped from western Maryland and from Illinois are direct competitors with Pennsylvania stock, particularly in Pittsburgh and other western cities of the Commonwealth.

Seasonal Variation in Supply

Although peaches are chiefly a mid-summer fruit, there are light receipts in June. The decrease in receipts of early season peaches may be attributed to the lighter production of early white peaches in Georgia. Because of poor quality, the very early varieties are in small demand and as a result are unprofitable.

The July and August receipts of peaches are heaviest. They are increasing because it is in these two months that the increased supplies from Georgia, North Carolina and the other southern states arrives in Pennsylvania cities in the greatest volume. With fewer early season and late season peaches and more mid-summer peaches being used, it is evident that the marketing season is shortening.

Receipts of peaches have been heavy in September and October with a tendency to decrease in the latter month. This would support the contention offered by some that the consumer does not demand peaches to any great extent toward the end of the peach season.

Pennsylvania Production and Shipments

The average annual production of peaches in Pennsylvania for the past six years has been nearly one and a half million bushels. Although the production from year to year is variable due to frost damage, the production in the Commonwealth is tending to increase. The 1926 crop amounted to nearly two and a half million bushels, about one million bushels more than the six year average, showing how important Pennsylvania has become as a peach producing state in good crop years.

Rank in Production. Although ranking fifth among the states in peach production in 1926 and fourth in 1923, Pennsylvania does not generally rank within the first five. California and Georgia have ranked first and second respectively for the last six years.

The other states have shown a wide range in ranking each year due to freezing injury to buds or blossoms.

Table 10. Rank of Peach Producing States

1921	1922	1923	1924	1925	1926
1. California	California	California	California	California	California
2. Georgia	Georgia	Georgia	Georgia	Georgia	Georgia
3. Texas	New York	New Jersey	Arkansas	Arkansas	New Jersey
4. New York	Missouri	Pennsylvania	New Jersey	New York	Illinois
5. Alabama	Oklahoma		N. Carolina	Texas	Pennsylvania
6. Colorado	Arkansas		Tennessee	New Jersey	
7. Washington	Tennessee		New York	N. Carolina	
8. Utah	New Jersey		Texas	Tennessee	
9. N. Carolina	Texas		Oklahoma	Alabama	
10. S. Carolina	Ohio		Pennsylvania	Ohio	
11. Arkansas	Pennsylvania			Oklahoma	
12. Oklahoma				Washington	
13. Michigan				Missouri	
14. Pennsylvania				S. Carolina	
15.				Pennsylvania	

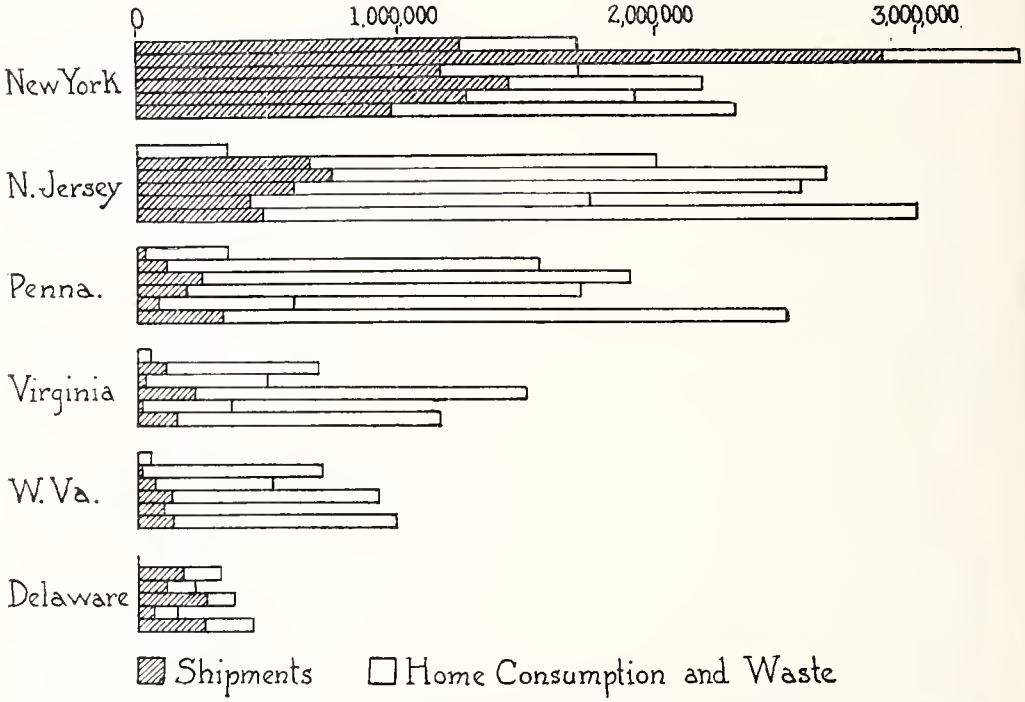
Rank in Shipments. Pennsylvania does not rank high as a carlot shipper of peaches. Even in years of large production the bulk of the peaches are not marketed by rail. In 1923 and 1926, years of large production, Pennsylvania ranked twelfth as a carlot shipper. In 1921, 1922, 1924 and 1925, years of light production, the state ranked from fourteenth to sixteenth. The demand of the home markets makes heavy shipping of peaches to distant markets unnecessary.

Table 11. Rank of Peach Shipping States

1921	1922	1923	1924	1925	1926
1. Georgia	California	California	Georgia	Georgia	Georgia
2. California	Georgia	Georgia	California	California	California
3. New York	New York	New York	New York	New York	Illinois
4. Colorado	Illinois	New Jersey	Arkansas	Arkansas	New York
5. Washington	Michigan	Washington	Colorado	N. Carolina	Arkansas
6. Texas	New Jersey	Colorado	N. Carolina	Texas	N. Carolina
7. Utah	Arkansas	Utah	New Jersey	New Jersey	Tennessee
8. Arkansas	N. Carolina	Michigan	Utah	Wasington	Washington
9. N. Carolina	Colorado	Maryland	Illinois	Colorado	Colorado
10. Tennessee	Utah	Arkansas	Texas	Tennessee	New Jersey
11. Michigan	Washington	Ohio	Tennessee	Illinois	Texas
12. Idaho	Ohio	Pennsylvania	Maryland	Ohio	Pennsylvania
13. Ohio	Delaware		Delaware	Michigan	
14. Pennsylvania	Maryland		Virginia	Pennsylvania	
15.	Indiana		Pennsylvania		
16.	Pennsylvania				

Leading Pennsylvania Peach Counties. All counties in the Commonwealth produce some peaches although this production is very limited in Potter, McKean, Cameron, Forest, Elk and Pike Counties. The heavy producing counties may be separated into two main sections: those in the southeastern and southcentral part of the Commonwealth, and those counties in the southwestern part of the Commonwealth.

Chart XVI. Comparison of Production and Shipments by States, 1921-1926



The first bar of each group represents the production of peaches in that state during 1921, while the shaded portion represents the quantity of fruit shipped that season, figuring 400 bushels per car. Similar bars for each succeeding year follow. The large proportion of the New York production which is shipped is shown while shipments from Pennsylvania are only a small portion of the crop. Barring unfavorable weather conditions, production is increasing in all of the states shown.

Table 12. Leading Peach Producing Counties

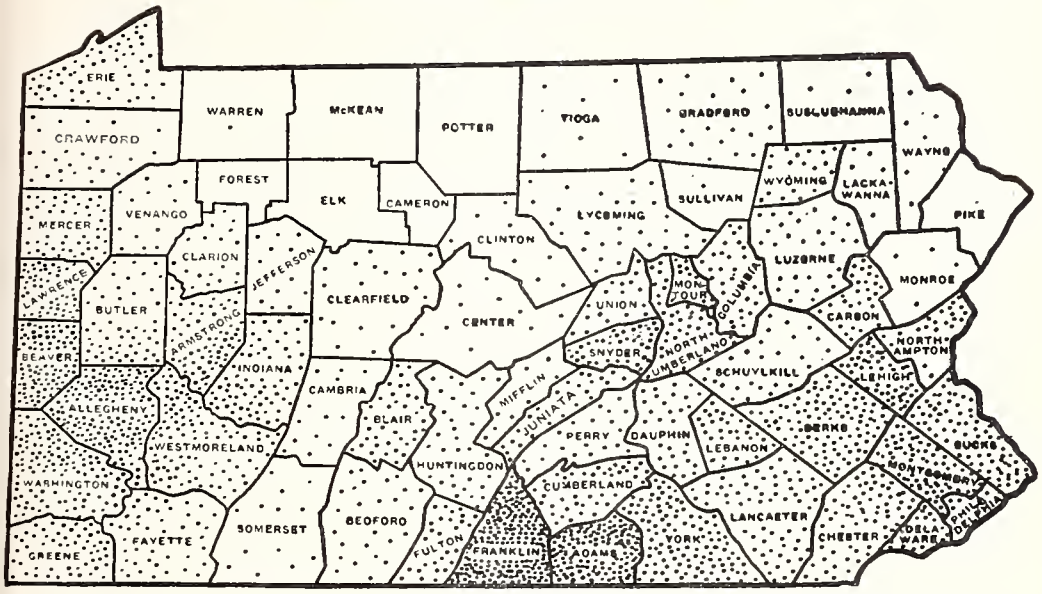
	1921	1922	1923	1924	1925	1926
1.	Allegheny	Montgomery	Allegheny	Franklin	York	Franklin
2.	Beaver	Berks	Franklin	Allegheny	Berks	Allegheny
3.	Bucks	Bucks	Adams	Westmoreland	Adams	Adams
4.	Berks	Allegheny	Montgomery	Adams	Chester	Washington
5.	Northumberland	York	Beaver	York	Bucks	Berks
6.	York	Chester	Berks	Berks	Montgomery	Westmoreland
7.	Franklin	Adams	Washington	Washington	Lehigh	Beaver
8.	Cumberland	Washington	Bucks	Montgomery	Franklin	Bucks
9.	Snyder	Franklin	Chester	Bucks	Lancaster	Chester
10.	Washington	Beaver	Westmoreland	Beaver	Carbon	Indiana

Table 13. Leading Peach Shipping Counties

	1921	1922	1923	1924	1925	1926
1.	Lehigh	Berks	Franklin	Franklin	Berks	Franklin
2.	Erie	Adams	Montgomery	Berks	Adams	Berks
3.	Montgomery	Carbon	Berks	Adams	York	Adams
4.	Northumberland	Franklin	Adams	Montgomery	Montgomery	York
5.	Wyoming	Union	York	York	Carbon	Cumberland

Chart XVII. Peach Production in Pennsylvania—1926

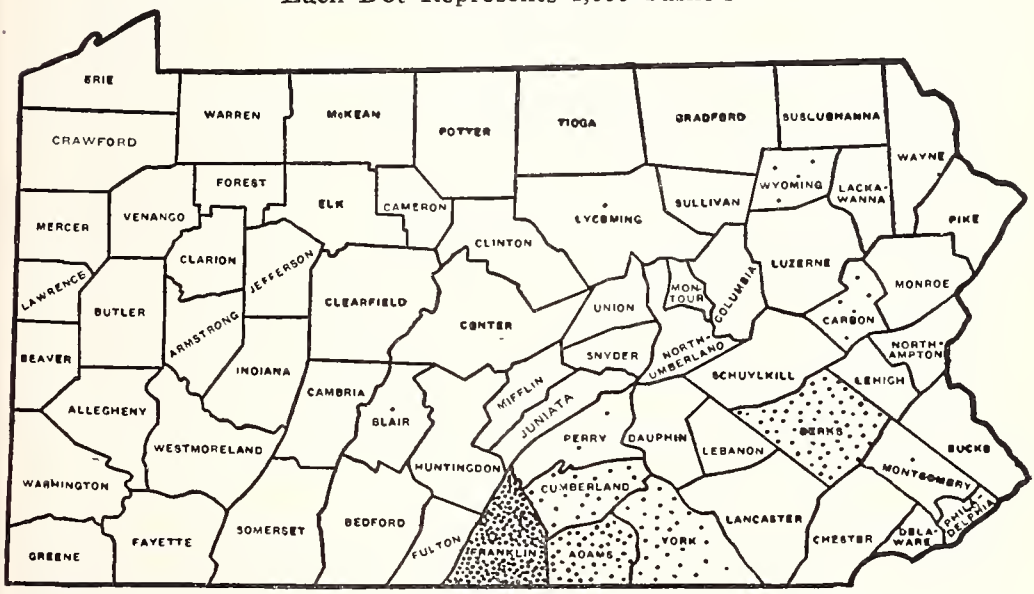
Each Dot Represents 1,000 bushels



The three important peach producing districts are, first; Franklin-Adams Counties, second; Allegheny-Beaver and adjacent counties and third; the southeastern counties.

Chart XVIII. Carlot Shipments of Peaches in Pennsylvania—1926

Each Dot Represents 1,000 bushels



This chart indicates the few counties in the Commonwealth from which peaches were shipped. Franklin held first place, with Berks, Adams, York and Cumberland following in the order named. The balance of the production was sold locally. No shipments were made from the important producing districts of western Pennsylvania and only a few from southeastern Pennsylvania.

Most of the production in the Commonwealth is from small orchards and the surplus or shipping area is fairly well concentrated into a few counties in the southcentral part of the state, chief of these being Franklin, Berks, Adams and York Counties.

Destinations of Pennsylvania Peaches. Figures are available from the United States Department of Agriculture showing the number of carloads of fruits and vegetables used in many large cities in the country in the four years, 1923-1926 inclusive. Fifty-nine cities used nearly 70 per cent of the 1926 Pennsylvania peach shipments. Seventeen per cent of these cars were received in 15 Pennsylvania cities, nearly 10 per cent in five Ohio cities, over nine per cent in three Massachusetts cities, and over eight per cent in five New York cities. The figures show that the bulk of the Pennsylvania shipments are used in the larger cities in Pennsylvania and nearby states. It also shows the wide distributions of Pennsylvania peaches in more distant mid-western and southern states.

Table 14. Unloads of Pennsylvania Peaches by States

	56 cities 1926	32 cities 1925	24 cities 1924	24 cities 1923
Pennsylvania	144	37	102	154
Ohio	81	11	61	22
Massachusetts	78	17	34	44
New York	7	5	----------	12
Maryland	57	28	*	*
Michigan	32	2	15	4
District of Columbia	31	----------	*	*
Illinois	23	----------	19	5
Indiana	15	----------	*	*
Florida	12	*	*	*
Kentucky	7	2	4	1
Virginia	6	*	*	*
Missouri	5	----------	----------	----------
New Jersey	3	1	*	*
Louisiana	3	----------	1	1
Wisconsin	1	----------	*	*
Maine	1	*	*	*
Rhode Island	1	----------	*	*
Connecticut	1	*	*	*
Total	568	103	236	243
Pennsylvania Shipments	826	206	448	615

*No record available for any cities in state during the year.

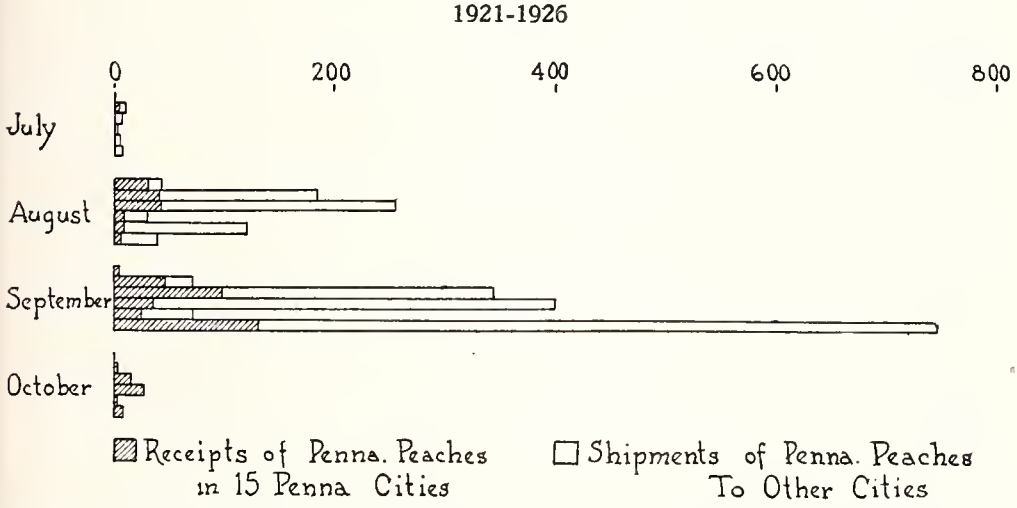
Cost of Producing Pennsylvania Peaches. A survey was made by the United States Department of Agriculture in 1925 to determine the cost of producing peaches in the principal producing sections of the country. Table 15 compares the cost of producing peaches in the commercial peach section of Pennsylvania with the cost in the main southern and eastern peach producing states.

Table 15. Cost rates to produce a bushel of peaches (with interest on investment) f. o. b. local station as in 1925. Figures compiled by the United States Department of Agriculture

State		Amount
New York,	(Western district),	$1.13
Georgia,	(Fort Valley district),	1.10
New Jersey,	(Southern district),	1.10
North Carolina,	(Sandhill district),	1.07
Illinois,	(Centralia district),	1.06
Georgia,	(Northern district),	1.01
Maryland,	(Western district),	1.01
Pennsylvania,	(Chambersburg district),	.97

According to the survey, the Pennsylvania producer in the Chambersburg district has an advantage in cost of production over the producers in other sections which ship heaviest into Pennsylvania markets.

Chart XIX. Comparison of Pennsylvania Peach Receipts and Shipments by Months

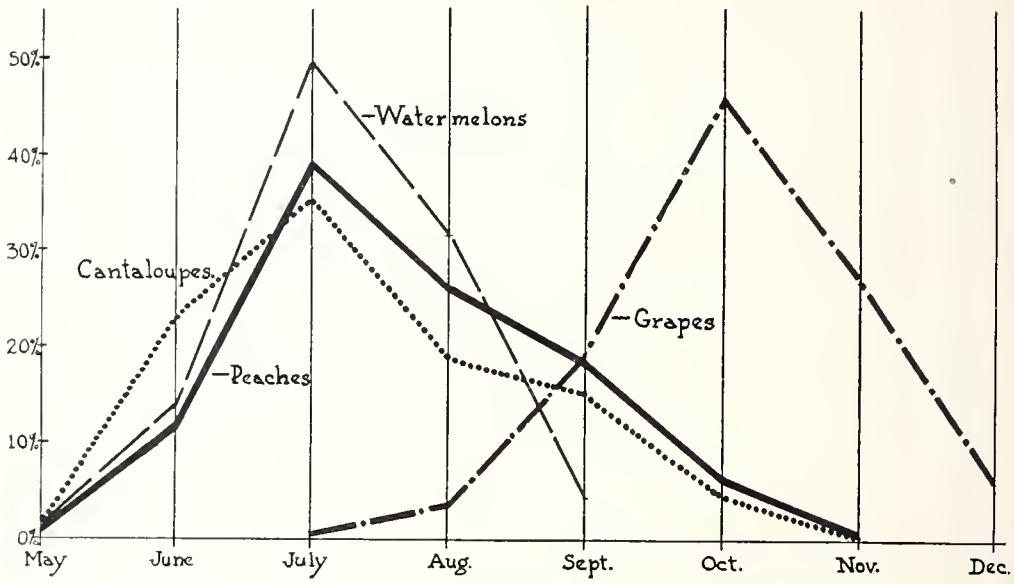


The first bar of each group represents the total shipments of peaches in Pennsylvania during each shipping month of 1921. The shaded portion represents the Pennsylvania shipments which reached the 15 markets. During August and September many more cars of Pennsylvania peaches are shipped than reach the markets named. These both go to smaller towns in Pennsylvania and to other states as indicated in Table 14.

Competing Commodities. Since peaches are a seasonal commodity, only sold in the markets largely during three months, they compete mostly with cantaloupes, watermelons and grapes. Chart 20 shows the competition between these four commodities during the months when they are received by rail in Pennsylvania markets. It is apparent that cantaloupes and watermelons compete greatly

Chart XX. Comparison of Receipts of Peaches, Grapes and Competitive Fruits by Months

15 Markets, 1921-1926



Using 100 per cent to indicate the average annual receipts of each commodity, the percentage of the annual receipts used each month is shown by this chart.

The largest volume of peaches, cantaloupes and watermelons are received during July, with grapes reaching their high point in October.

with peaches, since the peak receipts for these three commodities come in July and continues heavy through August. Grapes are received heaviest in October, competing chiefly with peaches and cantaloupes in September, and considerably in October. Since the bulk of Pennsylvania peach shipments reach the markets in September, they have little competition from watermelons, but more from cantaloupes, grapes, early apples and pears.

Competing States. Maryland, West Virginia, Illinois and New Jersey compete chiefly with Pennsylvania in peach shipping. The Pennsylvania producer has little advantage in freight rates over these competitors in reaching state markets. Therefore, the greatest care must be taken in uniform grading and packing in order to win out in this competition.

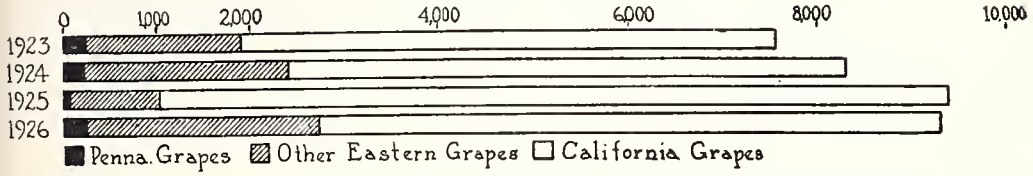
GRAPES

Sources of Grape Supply

Annual Receipts. An average of 7330 cars or about 70,000 tons of grapes have been received during each of the past four years in 15 large markets of the Commonwealth. Since the bulk of these grapes are received in the markets during less than two months time, they must be disposed of rapidly.

The receipts of grapes increased rapidly during 1923, 1924 and 1925 but decreased slightly in 1926. This increase in grape consumption is due principally to the much greater volume of juice grapes used since 1921, which are received principally from California.

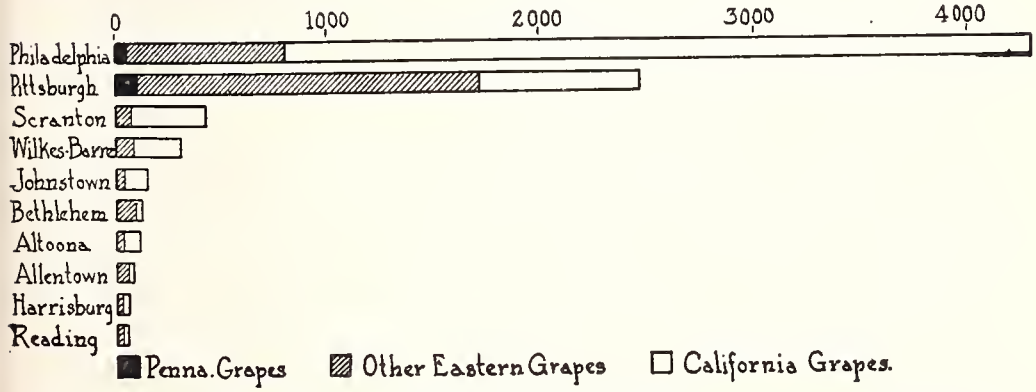
Chart XXI. Annual Receipts of Grapes
15 Markets, 1923-1926



This chart shows that receipts of grapes are increasing chiefly from California. Except from the short crop of 1925, receipts of eastern grapes increased although there has been little change in Pennsylvania figures.

Receipts from Pennsylvania. Philadelphia uses approximately 4,500 carloads of grapes each year of which about 80 per cent are received from California and very few from Pennsylvania. Although Pittsburgh uses an average of 2,000 fewer cars a year than Philadelphia, the former city uses nearly as many eastern grapes and more

Chart XXII. Average Annual Receipts of Grapes by Cities
1923-1926

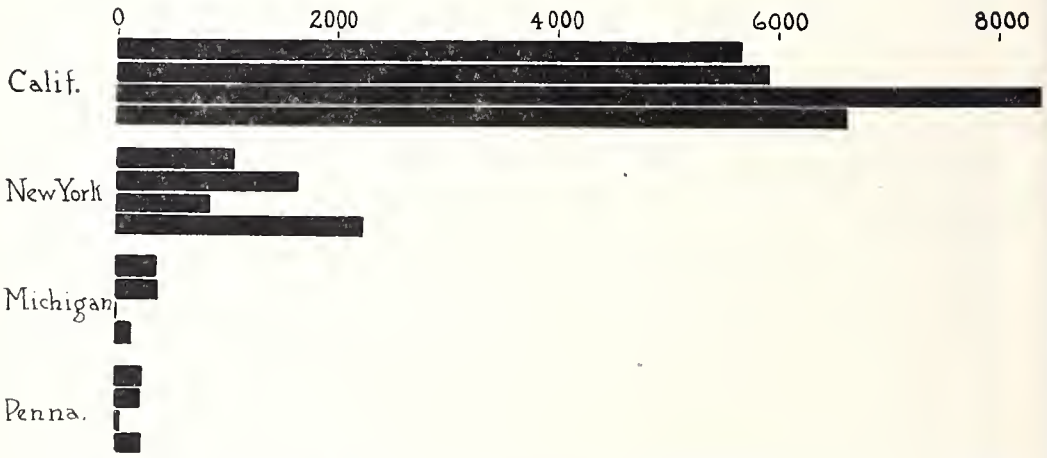


Philadelphia receives the major portion of its supply from California and to a much larger degree than in the case of Pittsburgh. Pittsburgh uses more Pennsylvania and more eastern grapes than any market in the Commonwealth chiefly because of nearness to the producing districts along Lake Erie. The other cities shown receive only small quantities of Pennsylvania grapes.

Pennsylvania grapes than Philadelphia. This is due to the proximity of Pittsburgh to the Erie County grape belt in Pennsylvania and because it is nearer to the New York and Michigan grape districts.

Scranton and Wilkes-Barre are the most important grape markets in the Commonwealth outside of Philadelphia and Pittsburgh. Nearly 80 per cent of the receipts at these two markets are from California and the bulk of the remainder are from New York. Pennsylvania and Michigan receipts are light in these markets. Bethlehem and Allentown are the only two cities of the 15 studied which use fewer California grapes than eastern grapes.

Chart XXIII. Source of Carlot Grape Receipts by States
15 Markets, 1923-1926



The first bar of each group represents the receipts from each state during 1923, similar bars for succeeding years following.
California and New York are increasing in quantity, while Pennsylvania remains practically constant and Michigan declines.

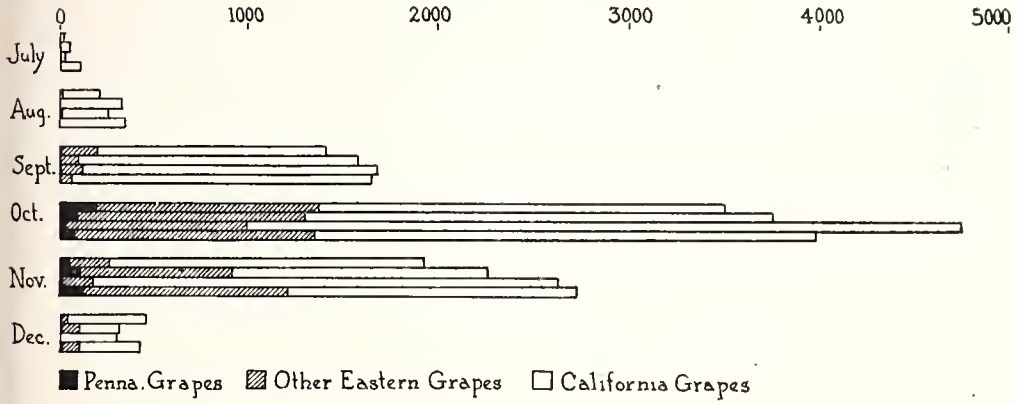
California has been the chief source of grape supply for Pennsylvania cities during the past four years, having increased considerably since 1923. New York has been second with these receipts increasing. Pennsylvania and Michigan are the other important sources with supplies averaging about the same.

Comparative Monthly Supplies

Grapes are received in carlot quantities from July through December. However, these receipts are very scant in July and relatively light in August and December. The heavy grape shipping season starts in September, reaches its peak in October and continues very strongly through November. The September and October receipts dropped off considerably in 1926 while the very early and late receipts were increased in 1926 over 1925. A continuation of this tendency to lesson the peak movement and to lengthen the grape shipping season would be a very desirable move by the grape shippers in solving the acute grape marketing problem.

Chart XXIV. Carlot Receipts of Grapes by Months

15 Markets, 1923-1926



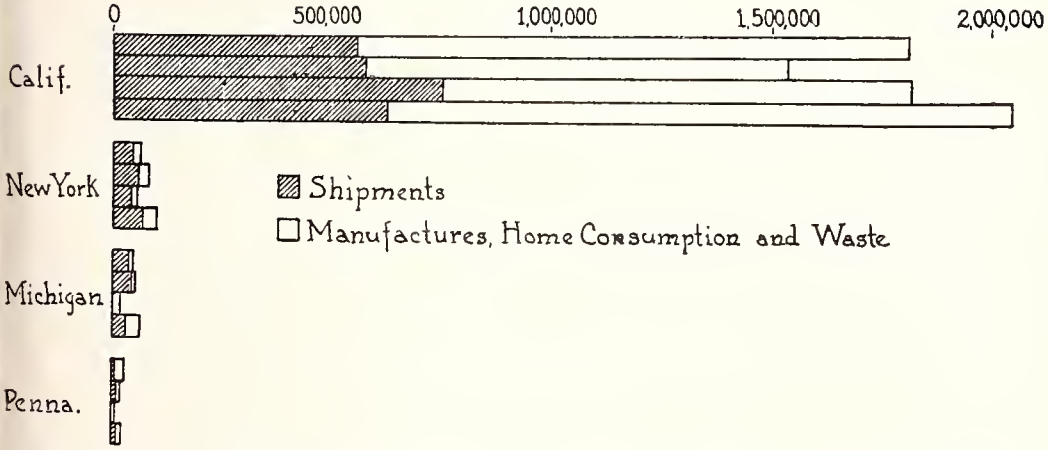
The first bar of each group represents the receipts during each shipping month in 1923, with similar bars for succeeding months following. There is a general trend of increase in receipts over the corresponding month of the previous year from September to November. Receipts of Pennsylvania grapes are declining in October and increasing in November.

Pennsylvania Production and Shipments

Pennsylvania ranked fourth in grape production in 1922 and since then has ranked fifth each year. In shipping grapes, Pennsylvania has ranked uniformly in fourth place among the states except in 1925, when it ranked third.

Chart XXV. Comparison of Production and Shipments by States

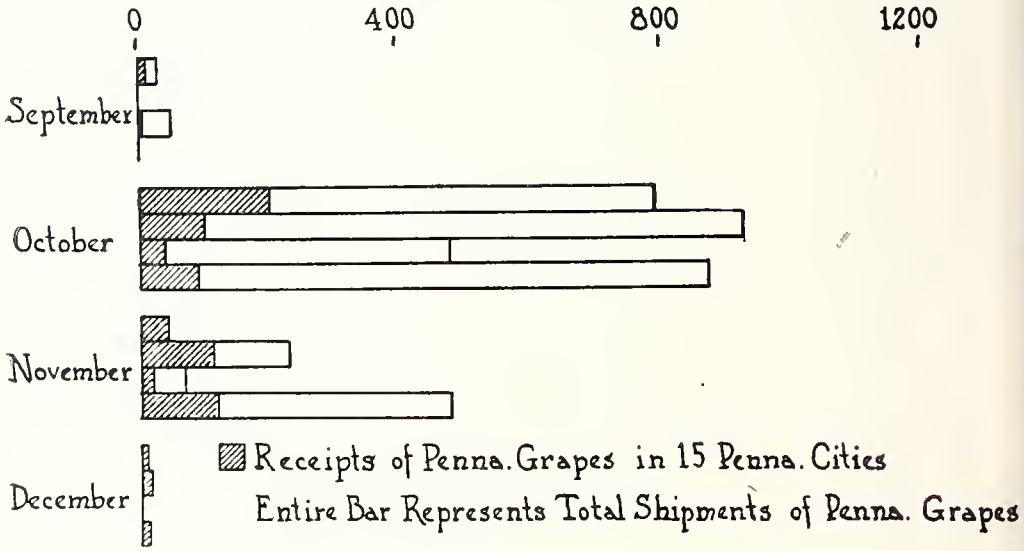
1923-1926



The first bar of each group represents the production for 1923 with the shaded area representing shipments based on 10 tons per car. Similar figures for succeeding years follow. The large proportion of the unshipped California production is dried into raisins.

The large percentage of grape shipments is due to the fact that the grape growing area in the state is a highly concentrated section in the northeastern part of Erie County which makes it almost imperative to ship in order to dispose of the crop. The entire Pennsylvania grape shipments of 1926 were loaded at five stations

Chart XXVI. Comparison of Shipments and Receipts of Pennsylvania Grapes 15 Markets, 1923-1926



The first bar of each group represents the shipments of Pennsylvania grapes during that month of 1923, with succeeding years following. The shaded area indicates the number of cars of Pennsylvania grapes which reached the 15 markets. Part of the balance were received in Pennsylvania cities from which records are not available and the remainder are marketed outside the Commonwealth as shown in Table 16.

Table 16. Initial Destinations of Grapes from Pennsylvania

State	3 yr. Average	1926	1925	1924
Pennsylvania,	305	472	92	350
New York,	303	460	159	290
Ohio,	98	86	144	63
New Jersey,	82	121	45	81
Illinois,	46	52	61	24
Massachusetts,	29	33	4	49
Connecticut,	14	22	1	18
Wisconsin,	12	22	----------	15
Maryland,	9	16	----------	10
Michigan,	6	15	2	----------
Indiana,	3	4	1	4
Delaware,	2	7	----------	----------
District of Columbia,	2	1	5	1
Rhode Island,	2	4	----------	2
Tennessee,	2	2	----------	4
Oklahoma,	2	----------	----------	6
Virginia,	1	1	----------	2
Others,	8	14	4	5
Total,	925	1332	518	924

Initial Destinations of Pennsylvania Shipments

The initial destinations of Pennsylvania grape shipments for 1924, 1925, and 1926 show that there is a rather wide distribution but that cities in Pennsylvania and New York each use about one-third of these shipments. Cities in Ohio, New Jersey and Illinois are the other more important users of Pennsylvania grapes.

Competing Sections. As the price level of California grapes will probably be low in the future, premium prices for eastern grapes offer the most hopeful outlet for the Pennsylvania grower. These can best be secured by capitalizing the general good quality of Pennsylvania grapes through a standardized pack of table grapes which will be superior to those from either New York or Michigan, the two competing producing states.